

Taillight Shiner

Notropis maculatus

Guidelines for Landowners Using Conservation Practices

Missouri Department of
Conservation

Common name ▪ Taillight Shiner
Scientific name ▪ *Notropis maculatus*
State status ▪ Endangered
Federal status ▪ None

Ecology

Currently, the taillight shiner is found in Missouri only in the southeastern corner of the state in Bollinger and Butler counties. It prefers low-gradient streams, sloughs, lakes, oxbows and swamps with sluggish flow and emergent vegetation. It is a schooling species with a varied diet of small crustaceans, insects and algae. Taillight shiners complete their life cycle in one year. Their body length ranges from 1.9 to 2.7 inches in length. Spawning begins in April and extends into mid-June.

Reasons for Decline

The taillight shiner is one of the rarest minnows in Missouri, with current populations being the remnants of a former widespread distribution. The fragmentation and decline of populations of the species are largely a result of habitat loss due to the draining of wetlands for agricultural purposes. Non-point source pollution also may be a contributing factor to the decline of the taillight shiner.

Recommendations

Taillight shiners are very specific in their habitat requirements, which explain their limited range in Missouri. Because of this, alterations to existing habitat could eliminate this species from part of its natural, historical range. Protection of lowland streams, sloughs, lakes, and wetlands is critical to insure the long-term existence of the taillight shiner and other bottomland fish species in Missouri.



Photo Credit: Howard L. Jelks

Efforts should be made to ensure our waterways are healthy through protection and/or restoration of habitat for this and other aquatic species.

Avoid constructing stream crossings. If unavoidable, culverts and stream crossings should be constructed with the same bottom elevation as the existing streambed to avoid restricting stream flow and obstructing fish passage.

Bank stabilization materials should consist only of rock, clean broken concrete or similar materials free of pollutants, silt and extraneous debris including exposed rebar. Erosion and sediment controls should be implemented, maintained and monitored for the duration of a project.

Limit clearing of vegetation, including standing and downed timber, to that which is absolutely necessary for construction purposes. Re-establish and maintain forested riparian corridors at least 100-feet wide along streams used by taillight shiners to reduce erosion and capture nutrient rich runoff. Exclude livestock with fences to allow the area to naturally re-vegetate. Discourage cattle from using streams that contain taillight shiner habitat. Move watering areas into pastures and away from streams.

Refer to Management Recommendations for Construction Projects Affecting Missouri Wetlands and Management Recommendations for Construction Projects Affecting Missouri Streams and Rivers for additional guidelines.

Consider the balance between adverse and beneficial practices when determining the overall effect of a conservation practice.

Beneficial Practices

- Limit livestock access to streams.
- Protection and restoration of riparian corridors along streams and wetlands.
- Wetland protection and restoration.
- Nutrient and pest management on adjacent agricultural fields that results in reduced opportunities for contamination of runoff.
- Practices that control erosion and prevent the delivery of sediment to the aquatic system will prove beneficial to this species.

Adverse Practices

- Sand and gravel removal beyond the excess material on adjacent unconsolidated bars.
- Project activities that occur below the high bank between March 15 and June 15, the spawning period of this fish.
- Constructing dams and other impoundment structures on streams that host the fish.
- Improper erosion and sediment control.
- Culverts, fords, and stream or ditch crossings that create a barrier to fish passage or restrict stream flow.
- Unnecessary vehicle and equipment stream crossing.
- Removing or degrading the riparian corridor along streams or wetlands.
- Draining or reducing known wetland habitat within the range of this species.
- Unmanaged application of pesticides, animal waste or fertilizers.

Information Contacts

Missouri Department of Conservation
Policy Coordination Section
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Jefferson City, MO 65102-0180
Telephone: 573-751-4115
<http://www.mdc.mo.gov/nathis/endangered/>

Missouri Department of Natural Resources
Division of Environmental Quality
P.O. Box 176
Jefferson City, MO 65102-0176
Telephone: 800-361-4827 / 573-751-1300
<http://www.dnr.mo.gov/env/index.html>

U.S. Army Corps of Engineers
Regulatory Branch
700 Federal Building
601 E. 12th Street
Kansas City, MO 64106-2896
Telephone: 816-389-3990
<http://www.nwk.usace.army.mil/>

U.S. Environmental Protection Agency
Water, Wetlands, and Pesticides Division
901 North 5th Street
Kansas City, KS 66101
Telephone: 913-551-7003 / 800-223-0425
<http://www.epa.gov/region7/>

U.S. Fish and Wildlife Service
Ecological Services Field Office
101 Park DeVille Dr., Suite A
Columbia, MO 65203
Telephone: 573-234-2132
<http://www.fws.gov/midwest/partners/missouri.html>

Legal

The Missouri Department of Conservation prepared these guidelines for conservation practices with assistance from other state agencies, contractors, and others to provide guidance to those people who wish to voluntarily act to protect wildlife and habitat.

Compliance with these management guidelines is not required by the Missouri wildlife and forestry law or by any regulation of the Missouri Conservation Commission. Other federal, state or local laws may affect construction practices.

“State Endangered Status” is determined by the Missouri Conservation Commission under constitutional authority, and specific requirements for impacts to such species are expressed in the Missouri Wildlife Code, rule 3 CSR 10-4.111.